connective tissue and capillaries. It is concluded that there occurs an apparently little-known development of organized peritoneal exudate, in the form of a pedunculated formation, the end being about the size of a pea. Two such bodies may adhere to each other and cause a probably post-traumatic (as from blows on the abodmen) strangulation of the intestine. In these cases two rare symptoms occur; a bradycardia with a pulse of about 52, and a retardation of the effect of morphine. The latter is probably due to the administration of the morphine by mouth into a well-filled stomach. A quick and easy cure can be obtained by a right-sided operation.

## THERAPEUTICS

UNDER THE CHARGE OF

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**Whooping Cough. Its Treatment with Vaccine.**—Wilson (*New York Med. Jour.*, 1913, xcvii, 823) reports a series of 24 children with whooping cough treated by pertussis vaccine. He gave the vaccine in doses of 20,000,000 to 40,000,000 bacteria. The dosage was controlled, after the initial dose, by the range of temperature and the severity of the cough. The paroxysms diminished in frequency and in severity and in some of the children very promptly. The characteristic whoop disappeared and the cases soon became clinically simple cases of bronchitis. The shortest duration of treatment was nine days, the longest forty-eight days, and the average twenty-three days.

**The Vaccine Treatment of Whooping Cough.**—Sill (*Amer. Jour. Dis. of Child.*, 1913, v, 379) has employed pertussis vaccine for the treatment of 33 children suffering from whooping cough. He believes that the vaccine markedly diminished the number and severity of the paroxysms and the amount of vomiting. The dosage of the vaccine was regulated more by the severity of the disease than by the age of the child. The youngest child treated was one month old and the oldest was six years. Most of the children were from six months to three years of age. The dosage of the vaccine varied from 20,000,000 in the mild cases to 60,000,000 in the severe cases. The cases that were treated early in the disease seemed to respond more quickly to the treatment, and the course of the disease was shortened. In all cases, however, after one to three injections the number and severity of the attacks were markedly diminished. The children showed greater improvement when the vaccine was given in moderately large doses at intervals of from one to two days. Sill advises as the correct dosage for mild cases 50,000,000 bacteria every other day, and for severe cases this same dose every day or 100,000,000 every other day. The vaccine is given subcutaneously in the abdomen or buttocks, and no untoward effects were noted. No inflammation, swelling, or constitutional symptoms occurred after the injections. Sill also gave the vaccine to children constantly exposed to whooping cough, as a prophylactic measure, and none of these children contracted the disease. He believes that the vaccine when injected in small doses has a certain immunizing action against whooping cough.

**The Effect on the Nervous System of Healthy Rabbits of Large Doses of Salvarsan.**—Doinikow (*Münch. med. Woch.*, 1913, lx, 796) writes concerning experiments undertaken to determine whether the hemorrhagic encephalitis reported by many different observers as a result of salvarsan injections was really due to salvarsan. He could determine no histological changes in the nervous system of rabbits that received for long continued periods of time considerably larger doses than the usual therapeutic doses of salvarsan. Only in experiments where distinctly poisonous doses were used (0.11 to 0.15 gram per kilo) could any alterations in the nervous systems be determined. These alterations consisted of congestion and hemorrhages, but no thromboses of the cerebral vessels were found.

**Neosalvarsan.**—Dreyfus (*Münch. med. Woch.*, 1913, lx, 630) says that neosalvarsan seems in general to be milder and less intensive in its action than salvarsan, therefore salvarsan is to be preferred in the treatment of syphilitic diseases of the central nervous system. Dreyfus thinks that the combined use of salvarsan and neosalvarsan may be of great value in the treatment of many cases of syphilis. One must not forget that untoward by-effects occur with the use of neosalvarsan in spite of its greater solubility. He emphasizes the importance of using freshly distilled water and that the water should be distilled and the solutions made in Jena glass. This last precaution is necessary because certain by-effects observed after intravenous injections of salvarsan have been attributed to the action of alkali from glass.

**Mercury and Salvarsan.**—Finger (*Wien. klin. Woch.*, 1913, xxvi, 561) says that salvarsan should be used in combination with mercury in early syphilis as a means of abortive treatment. He also advises the use of salvarsan in tertiary syphilis when a rapid effect is desired. Finger, however, believes that salvarsan is not superior to mercury in secondary syphilis, and, furthermore, it should not be used as a routine measure in the treatment of secondary syphilis because of certain dangers. He refers especially to the cranial nerve symptoms that have seemed to occur so much more frequently since the use of salvarsan and that have been directly attributed by some observers to the salvarsan injections.

**Trivalin.**—Mehliss (*Deutsch. med. Woch.*, 1913, xxxix, 65) says that trivalin is an efficient substitute for morphine in any case where the anodyne or sedative action of morphine is desired. Trivalin has no untoward action on the heart, respirations, or sensorium of the patient, and is, furthermore, less apt to cause gastric disturbance. Trivalin is a combination of morphine, caffeine, and cocaine valerianate.